

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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In re application of

UNDER FINAL REJECTION

Alcino Resende de ALMEIDA

EXPEDITED PROCEDURE REQUESTED

Appln. No. 08/859,353

Group Art Unit: 3753

Filed: May 20, 1997

Examiner: K. Lee

For: SEAT FOR GATE VALVE

REQUEST FOR RECONSIDERATION UNDER 37 CFR 1.116

Assistant Commissioner of Patents  
Washington, DC 20231

Sir:

In the Final Rejection of November 10, 1998, claim 4 was rejected under 35 U.S.C. § 112, first paragraph, on the grounds that the specification does not enable a person skilled in the art to which it pertains to use the invention commensurate in scope with these claims. Claim 4 was further rejected under 35 U.S.C. § 102 as being anticipated by Weeks. Claim 4 was still further rejected under 35 U.S.C. § 102 as being anticipated by Misikov et al.

With respect to the rejection of claim 4 under 35 U.S.C. § 112, first paragraph, it is noted that this issue has been raised several times during the prosecution of this application and was thoroughly discussed at an interview with the Examiner prior to filing the last Response. The "gas lift valve" is old and well known in the oil well production art and one skilled in the art would readily understand the scope and operation of such a valve. The Examiner's attention is

directed to the publications which were filed on February 26, 1996 in the parent application serial number 08/186,469. Both of the publications cited clearly referred to valves in describing the type of valve which is the subject of the present invention. In this particular art, a "valve" does not necessarily have to have some means for preventing the flow of fluid through the passage at one time or another during the operation of the valve. The valve as defined in claim 4 is a continuous flow valve and claim 4 specifically calls for the nozzle having a continuously open passage through which gas is allowed to flow. Accordingly, there is absolutely no basis whatsoever for rejecting claim 4 under 35 U.S.C. § 112, first paragraph. The specification clearly enables one skilled in the art to use the invention and therefore, it is respectfully requested that the rejection of claim 4 under 35 U.S.C. § 112, first paragraph, be withdrawn.

With respect to the rejection of claim 4 as being anticipated by Weeks, it is submitted that the patent to Weeks discloses a jet pumping system, which is entirely different from the present invention. The patent to Weeks refers to a system for pumping oil from a well which is generally known as a "jet pumping system". Such a system basically consists in using the energy of a fluid, commonly water under high pressure, and forcing this power fluid to flow through an ejector (or venturi) wherein the potential energy of the power fluid is transformed in kinetic energy. A drop of pressure occurs inside the throat-venturi

section and the fluid present in the well is then suctioned toward the venturi. There is a mixture of both flows, that is, the power fluid and the formation fluid, inside the throat and in the next section there is a diffuser which allows a partial recovery of the pressure which is supposed to be sufficient to lift the fluid to the surface.

The physical fundamentals of the Weeks device are completely different from the gas lift principle in which a gas under high pressure penetrates into the tubing string at a certain injection point, lowering the specific gravity of the fluid and thus requiring a minor pressure at the bottom of the well than the pressure which would be necessary if only fluid from the formation is contained throughout the tube. This feeding of gas can be done by means of a single hole in the column of tubes or by means of other more sophisticated devices.

In the present application, a convention device or gate valve provided with a round orifice has been replaced by special venturi. The advantages obtained are described in the specification. It is noted that in the valve of the present application, the formation fluid does not pass through the venturi. Thus, there is no analogy whatsoever between the apparatus of Weeks and the present invention. Therefore, it is respectfully requested that the rejection of claim 4 as being anticipated by Weeks be withdrawn.

The patent to Misikov et al. discloses a subsurface choke in the shape of a mouth or venturi which promotes self-lift or auto-lift. For

example, it allows the production of a well which does not normally flow by liberating the gas dissolved in the bottom of the well. The object of the Misikov et al. patent is that in cases where the well production is limited due to a low formation pressure, it is possible to continue the production by using a venturi. After passing through the venturi throat, the dissolved gas would be liberated from the oil. In the diffuser, a great deal of the original gas pressure would be recovered and the liberated gas would ensure the self-lift of a much more aerated fluid.

The process and apparatus of Misikov et al. have nothing to do with the present invention. In the present application, there is no fluid from the well passing through the gas lift valve. The arrangement of the present application as specifically set forth in claim 4, does not aim to liberate dissolved gas to promote auto-lift. On the contrary, the gas lift of the present invention supplements the gas that is normally present in the formation. Therefore, claim 4 is clearly not anticipated by Misikov et al.


In view of the foregoing arguments, it is submitted that claim 4 is in full compliance with the requirements of 35 U.S.C. § 112, first paragraph. Furthermore, claim 4 is not anticipated by either Weeks or Misikov et al. Therefore, it is respectfully requested that claim 4 be allowed and the application passed to issue forthwith.

If for any reason the Examiner is unable to allow the application on the next Office Action and feels that a further interview would be helpful to resolve any remaining issue, the Examiner is respectfully requested to contact the undersigned attorney for the purpose of arranging such an interview.

Filed concurrently herewith is a Petition and Fee Letter for Two Month Extension of Time and check for \$380.

Applicant hereby petitions for any extension of time which may be required to maintain the pendency of this case and any required fee except for the Issue Fee, for such extension is to be charged to Deposit Account No. 19-4880.

Respectfully submitted,



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RVS:jljg

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